



Illinois U Library
the

University of Illinois Library
Undergraduate Division
Navy Pier
Chicago 11, Ill.

ILLINOIS ENGINEER



Read, "The Job of Civil Defense" by Major Lenox R. Lohr



DIAMOND CROSSOVER—CONGRESS STREET TERMINAL
RECENTLY DEDICATED SECTION, CHICAGO SUBWAY

(See page 3)

THE ILLINOIS ENGINEER, APRIL, 1951—VOLUME XXVII, NO. 4

Address all communications to the Society at 631 East Green St., Champaign, Illinois.
The Society is not responsible for statements made or opinions expressed in this publication.

ILLINOIS SOCIETY OF PROFESSIONAL ENGINEERS, Incorporated

Affiliated with the National Society of Professional Engineers

BOARD OF DIRECTION

VIRGIL E. GUNLOCK, President (67*)

A. DOUGLAS SPICER, Vice President (67)
H. E. BABBITT, Secretary-Treasurer (67)

GEORGE E. EKBLAW, Past President

JOHN HENLINE, Ambraw (67)
L. K. CRAWFORD, Capital (68)
J. R. GARDNER, Central Illinois (68)
E. W. LEHMANN, Champaign County (68)
H. F. SOMMERSCHIELD, Chicago (68)
ROBERT M. ROY, DuKane (68)
C. S. WARD, Egyptian (67)

F. L. DUNAVAN, Illinois Valley (67)
C. E. ROGERS, Joliet (67)
L. S. PAPPMEIER, Kewanee (68)
S. A. SIMONSON, Lake County (67)
W. E. WILLIS, Madison County (67)
D. W. WALLACE, Peoria (67)
JOHN DUGUID, Rockford (68)

R. H. ANDERSON, Rock River (68)
R. G. BRICHLER, St. Clair (67)
W. A. OLIVER, N.S.P.E. Nat'l Director (67)
R. G. BRICHLER, N.S.P.E. Alternate National Director (66)
F. W. EDWARDS, I.E.C. Representative (66)
A. ROBERT JONES, Junior Representative (66)

* This refers to Annual Meeting at which present term expires.

ILLINOIS ENGINEERING COUNCIL REPRESENTATIVES

F. W. EDWARDS, Chairman; C. T. MORRISSETT, HENRY A. RIEDESEL, J. D. VOORHEES

P. E. ROBERTS, Assistant Secretary

CHAPTER OFFICERS

Ambraw

B. P. JOHNSON, President
R. B. WALTERS, Vice President
JOHN HARDWICK, Secretary-Treasurer
DAVE ABBOTT, Treasurer
JOHN HENLINE, Chapter Representative

Capital

L. D. HUDSON, President
A. F. KESSELL, Vice President
L. F. RYBURN, Secretary
DAVE ABBOTT, Treasurer
L. K. CRAWFORD, Chapter Representative

Central Illinois

HERMAN W. DORN, President
BARCLAY BEHRENDT, Vice President
F. E. TROXEL, Secretary-Treasurer
J. R. GARDNER, Chapter Representative

Champaign County

E. M. ANDERSON, President
J. C. DIETZ, Vice President
J. W. BRISCOE, Secretary-Treasurer
E. W. LEHMAN, Chapter Representative

Chicago

G. L. DEMENT, President
F. W. EDWARDS, Vice President
JOHN DOLIO, Secretary-Treasurer
H. F. SOMMERSCHIELD, Chapter Representative

Advertising

M. E. Amstutz, Chairman, W. H. Woelfer, Joseph A. Fagan, Chas. J. Harrish, A. R. Ayres, G. M. Bohlig, T. O. Cromeenes, J. P. Hollerick, W. M. Coopman, H. J. Schaab, S. R. Etnyre, F. Friedewald, D. M. Campbell, A. R. Carlson, P. Z. Horton, Sr.

Audit and Finance

A. Douglas Spicer, Chairman, V. E. Gunlock, H. E. Babbitt, C. E. Rogers.

Budget

A. Douglas Spicer, Chairman, V. E. Gunlock, H. E. Babbitt, C. E. Rogers.

Civil Defense

C. W. Klassen, Chairman, H. L. Brissenden, J. P. Murphy, J. A. Askren, F. A. Reickert, V. H. Kasser, Leo Cavell, Allen Boudinot, F. J. Kramer, M. B. Corlew, R. H. Anderson, David Johnson, J. J. Kearney, Frank E. Clark, P. Z. Horton, Jr.

Constitutional Amendments

J. H. Morgan, Chairman, H. E. Babbitt, R. G. Brichler, L. K. Crawford, George E. Ekblaw.

Cooperation With Illinois Architects

C. T. Morrisett, Chairman, J. G. Clark, W. W. DeCherrie, William T. Hooper, Jr.

Ethics and Practice

Alois W. Graf, Chairman, K. K. Stapleton, J. F. Sweetnam, K. Setzkorn, L. A. Miller, J. H. Weber, D. R. Miller, C. F. Abraham, V. E. Hopper, R. R. Bartelsmeyer, H. V. Hawkins, Denis Dwyer, Roy Kastner.

DuKane

J. F. BATEMAN, President
D. E. DREIER, Vice President
G. M. BOOTH, JR., Secretary-Treasurer
R. M. ROY, Chapter Representative

Egyptian

F. H. PERSSON, President
E. L. SHERERTZ, Vice President
J. L. BURNETT, Secretary-Treasurer
C. S. WARD, Chapter Representative

Illinois Valley

J. B. MORAN, President
LOUIS BOWMAN, Vice President
E. D. ANTROBUS, Secretary-Treasurer
F. L. DUNAVAN, Chapter Representative

Joliet

W. S. GRAY, President
F. H. TITTSWORTH, Vice President
W. S. CHANEY, Secretary
W. K. WALTZ, Treasurer
C. E. ROGERS, Chapter Representative

Kewanee

LEE I. OSBORN, President
C. E. MISSMAN, Vice President
C. F. BATES, Secretary-Treasurer
L. S. PAPPMEIER, Chapter Representative

Lake County

C. L. CALKINS, President

COMMITTEE APPOINTMENTS FOR 1951

Fees and Salaries

George L. DeMent, Chairman, E. H. Casson, E. E. Cooper, J. R. Gardner, L. F. Koberlein, A. F. Lee, C. F. Manion, L. I. Osborn, Hugo Stark.

Honorary Membership

W. J. Putnam, Chairman, C. F. Abraham, A. J. Schafmayer.

Illinois Award

W. B. Walraven (67), Chairman, Geo. Anderson (69), C. I. Burggraf (68), D. F. Campbell (67), Earl Rush (68), A. R. Boudinot (69).

Legislative Action

R. W. Wallace, Chairman, J. C. Beekman, M. L. Calvert, H. A. Fagerstrom, A. M. Frost, B. H. Janda, L. M. Spurling, W. W. Wallace, C. K. Willett.

Legislative Analyzing

H. F. Walder, Chairman, A. V. Marbry, William Russell, A. W. Neureuther, Robert Haroldson, Frank Dunavan, John Fulper, H. B. Bleck, G. R. Thacker, K. C. Hoeglund, C. E. Rogers, Roy Kastner, R. W. Wallace, Alois Graf, J. A. Moore.

Membership

John A. Askren, Chairman, D. R. Conner, H. H. Cordes, R. C. Kileen, W. J. Roberts, W. E. Deuchler, John T. Blankenship, J. K. Staatz, James Palmer, C. A. Anderson, Willard Flagg, W. E. Gronberg, F. J. Meek, H. F. Sommerschield, F. H. Tittsworth, R. E. Gibbs.

Past Presidents

George E. Ekblaw, Chairman, James Whelan, E. E. Cooper.

CYRIL DREW, Vice President

R. G. KRAMER, Secretary-Treasurer
S. A. SIMONSON, Chapter Representative

Madison County

G. H. SHANAHAN, President
C. K. GRAVES, Vice President
L. K. MEYER, Secretary-Treasurer
W. E. WILLIS, Chapter Representative

Peoria

KENNETH LEITER, President
BEN LOCKE, Vice President
C. T. BORCHERT, Secretary-Treasurer
DWAIN WALLACE, Chapter Representative

Rockford

CHARLES DEBES, President
GILBERT HENNING, Vice President
LYLE B. PORTER, Secretary-Treasurer
JOHN DUGUID, Chapter Representative

Rock River

R. G. THOMAS, President
V. E. HOPPER, Vice President
A. H. FERGER, Secretary-Treasurer
R. H. ANDERSON, Chapter Representative

St. Clair

F. W. MOORE, President
F. J. MEEK, Vice President
MANUEL GARCIA, Secretary-Treasurer
R. G. BRICHLER, Chapter Representative

Publications

W. H. Wisely, Chairman, M. R. Golly, R. Pendleton, Max Suter.

Public Interests

D. W. Wallace, Chairman, H. A. Kluge.

Publicity

Robert M. Roy, Chairman, Robert Lath, W. A. Jollie, Nat Kessler, B. F. Muirheid, W. Wilson, T. O. Cromeenes, Dolph Hoke, E. Quirk, Wm. T. Hooper, Jr., Julian Fried, J. B. Conroy, Theodore Olsen, Ben Locke.

Resolutions

J. L. Howie, Chairman, E. E. Cooper, F. Persson, F. D. Ellis, C. W. Goepfert, E. D. I. daugh, J. D. Voorhees.

Registration Laws

J. A. Moore, Chairman, Charles Debes, W. Deuchler, J. R. Gardner, Alois Graf, R. G. Lyon, L. S. Kraus, Arthur Lee, C. W. Ly, C. F. Manion, D. R. Miller, J. H. Morgan, J. Pappmeier, C. E. Rogers, R. G. Thomas, E. Wade.

State Building Code

C. T. Morrisett, Chairman, D. W. Wallace, V. T. Hooper, James Whelan, C. F. Gebhardt, A. Reidesel.

State Engineering Employees

A. M. Frost, Chairman, Gustav Rehm, Ca Jenkins.

U. S. G. S. Mapping

Max Suter, Chairman, George H. Dell, J. Beekman, R. F. Fisher, H. A. Kluge, B. C. Curdy, J. C. Penn, W. H. Ravner.

Of Professional Interest

IMPORTANT NOTICE

Read the paper: "The Job of Civil Defense," by Major Lenox R. Lohr, Illinois Director of Civil Defense, in this issue of the Illinois Engineer.

SHALL THE DATE OF THE ANNUAL MEETING BE CHANGED?

The following letter is self explanatory. If you have ideas on the subject, pass them along to your Chapter officers.

March 27, 1951.

TO THE CHAPTER PRESIDENTS AND CHAPTER SECRETARIES:

There was some discussion about the desirability of moving the date of the Annual Meeting to a more favorable time of the year, weather wise. A show of hands revealed that there were many more in favor of holding the Annual Meeting at a time when the weather was more desirable.

The constitution provides that the date of the Annual Meeting shall be set by the Board of Direction and it suggests the last week in January but does not make this one mandatory.

Will you please bring this matter to the attention of your chapter and poll them to find out how each individual feels.

It has been suggested that the last week in April or the first weekend in May might be the optimum time. However, if your chapter has other thoughts, the Executive Committee would like to have them so that it can be intelligently discussed with the Board of Direction at its May meeting.

Cordially yours,
H. E. BABBITT, *Secretary*.

CREDIT, WHERE CREDIT IS DUE

Through an oversight, credit was not given to James (Jim) Stein, Student member of Champaign County Chapter, for the time and effort he spent in acting as "Official Photographer" during the 66th Annual Meeting. Jim took all of the pictures on Page 3 of the March issue of the *Illinois Engineer* and a dozen or so more. Our thanks to Jim Stein for a fine job, well done.

COST OF LIVING INDEX

The correction factor to be applied to the I. S. P. E. schedule of Minimum Fees and Salaries was 184.2 for February, 1951. The factor is based upon the U. S. Department of Labor's most recent Consumer Price Index.

PRESIDENT'S MESSAGE

A great deal of time and effort recently has been given to the subject of unification of the engineering profession. This was an item on the agenda of the state president's meeting last month in Washington and it received important consideration.

The argument for the N.S.P.E. plan has been ably presented by our past N.S.P.E. president, Alex Van Prague who is a member of the national committee considering this subject. I do not believe that Alex is optimistic enough to think that the N.S.P.E. plan will receive substantial support when the final recommendations are made. As one oldtimer put it "the unification pot boils up every so often but it seems to be boiling higher now than ever before." This will be fine if a well done plan for unification comes out of the pot, but there seems to be remote prospects of this happening.

It is my opinion that the problem of unification can be solved properly in only one way. That is for the N.S.P.E. to grow in size and importance until it is naturally recognized as *The Society* which will represent all professional engineers on the national level. Some say that this can be accomplished by a doubling of our membership. Perhaps importance is more essential than mere numbers.

We certainly are gaining in importance every year. The national officers have done an outstanding job of gaining recognition for the national society. The advice and recommendation of N.S.P.E. has been sought by many congressional committees in the study of important national issues and by administrative departments in the formulation of national policies relating to professional engineering. We are gradually gaining importance on a national scale.

It is up to us in the state and local chapters to do our part so that we may gain in local importance. The final push that gains each additional new member must come from one of our present members at the local level. Let us each give a little of that "push" for our society.

V. E. GUNLOCK, *President, I.S.P.E.*

CONTENTS OF THIS ISSUE

	Pages
Of Professional Interest	1-3
The Job of Civil Defense—L. R. Lohr	4-7
Resumé of Business Transacted at 66th—Ekblaw	9-10
News from Chapters	11-14
Professional Directory	14

READ THE ADVERTISEMENTS

SUBSCRIPTION RATES

\$2.00 per year in advance to members of the Illinois Society of Professional Engineers. \$4.00 per year in advance to non-members in U.S.A. and its possessions, Canada, and Mexico. Foreign \$6.00. Single copies 40c. Published by the Illinois Society of Professional Engineers, Inc., at 631 East Green Street, Champaign, Illinois.
Entered as Second Class Matter April 27, 1949, at the Post Office, Champaign, Illinois.

VOX SECRETARII

P. E. ROBERTS, Assistant Secretary

Chapter President, Secretaries
and Membership Chairmen Conference

As this issue of the *Illinois Engineer* goes to press, final preparations for the Chapter Presidents, Secretaries and Membership Chairmen Conference are being prepared by the Secretary's Office. This is the third of such conferences conducted, the first being in Springfield, the second in Urbana, and the third in Peoria. The conference is primarily an exchange of ideas between chapter officers and if the Peoria conference follows the pattern of the two previous meetings, some excellent and workable ideas will be brought to your chapter by your officers. An idea is much like a pencil—not much good for anything until you begin to use it.

Advertising

Advertising for the *Illinois Engineer* was discussed at the Annual Meeting. In the discussion, it was pointed out that with a little help from each of the sixteen Chapter Advertising Committee chairmen, revenue could be increased substantially. After you have made the contacts and if you need help in followup, please let Mr. M. E. Amstutz know about it and either he or the Secretary's Office will lend a hand.

There are many consulting firms over the State of Illinois who should be displaying their card in the Professional Directory. The use of this space is limited to members of the Illinois Society and in spite of increased costs, the price of the space has not been raised. The cost of a professional card in twelve issues is less than the cost of the lowest priced direct mail campaign and it goes out each month for twelve months instead of only one time. Someone said, "If your business is not worth advertising, then advertise it for sale."

Dues Payment

Did you forget? Collection of dues is not equal to the amount received at the same time last year. Maybe you are one of the ones who forgot. Did you forget?

Miscellany

Spring is here. So says the calendar, but it didn't look much like Spring with a snowstorm on Easter Sunday. . . . The 67th Illinois General Assembly is getting up more steam with each passing week. . . . Baseball is with us again, "Get Two," remember—applications that is.

CAPITAL CHAPTER ACTIVE IN
CIVIL DEFENSE

(From Capital Chapter Chatter)

"Our part in the local civil defense organization was explained and discussed by Civil Defense Committee Chairman Pat Murphy. H. A. Spafford, substituting for a movie on civil defense that did not arrive in time for the meeting, effectively sold the need for a local civil defense program by his description of possible bombing effects on Springfield."

IN THE STATE LEGISLATURE

Bills Which Have Been Filed in the 67th General
Assembly of Interest to Professional Engineers

Many bills which have been introduced in the 67th General Assembly are of interest to professional engineers and the Illinois Society. With one exception, all of the bills listed below have been read and are on file in the Secretary's Office.

H. B. 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17 and 18 have to do with the requirements in general that the supported buyers of coal must buy Illinois produced coal. Jan. 23—second reading; Feb. 20—recalled to second reading. Amended. Further Consideration postponed.

H. B. 21, 53. Motor Fuel Tax bills increasing gas tax from 3c to 5c. Jan. 24—Committee on Revenue.

H. B. 37, 38. Public Utility Bills. Jan. 24—Committee Public Utilities, Railroads and Aviation. It should be of interest to professional engineers that in setting forth the requirements of engineering positions in H. B. 37, the second requirement is "a registered professional engineer under the Illinois Statutes". This requirement is mandatory for all of the following engineers: communications, transportation, water, safety, service, electrical and gas engineers.

H. B. 53. Permits municipal construction and operation of water purification plants. Jan. 24—Judiciary Committee.

H. B. 56. Creates Chicago Regional Port Authority. Jan. 24—Judiciary Committee.

H. B. 73. Fair Employment Practices Commission. Jan. 29—Executive.

H. B. 198. Provides for the securing of a qualified engineer by county boards to make cost estimates. Feb. 28—Committee on Municipalities.

H. B. 213. Legalizes the employment of a city manager in cities under 500,000 population. Feb. 28—Committee on Municipalities. March 21—Recommended for Pass.

H. B. 221. Makes it unlawful for barbers to fix prices. Violation revokes license. March 1—Committee on License and Miscellany.

H. B. 392. Amends Section 15 (removes grandfather clause) of the Professional Engineer Act. Repeals Act of July 24, 1941 which was the first one and the one found unconstitutional. March 21—Recommended for Pass.

S. B. 1. Creates Chicago Regional Port Authority. Jan. 23—Committee on Efficiency and Economy. March 21—Tabled.

S. B. 37. Creates Crab Orchard Commission. March 1—Reported Do Pass. Referred to Committee on Appropriations. March 21—Do Pass as Amended.

S. B. 67. F. E. P. C. Bill. March 13—Motion to discharge committee. Tabled.

S. B. 76. Restricts purchases to Illinois produced coal. Feb. 21—Recommended Do Not Pass. Tabled.

S. B. 95. Amends Section 3 of an act to create Sanitary Districts. Feb. 21—Recommended Do Pass. Feb. 28—First Reading.

S. B. 106. Creates Turnpike Authority. Feb. 21—Judiciary.

S. B. 107. Authorizes townships to build and operate waterworks and/or sewage works systems. Feb. 21—Committee on Municipalities.

S. B. 120. Motor Vehicle Laws Commission to make a study of laws, conditions of highways, etc. March 13—Do Pass. March 14—First Reading.

S. B. 128. Extends right of corporations to acquire rights to use natural rock domes for underground gas storage. March 1—Public Utilities, Railroads Committee.

Superhighways

S. B. 147. Creates a commission to study ways and means of State Government Economy. March 7—Executive Committee. March 21—Do Pass Appropriations Committee.

S. B. 148. Creates a commission to study the advisability and feasibility of a system of toll roads. March 7—Executive Committee.

S. B. 158. Amends Section 26a of the Counties Act to allow a levy of .01% to make maps and plots for assessment purposes. March 7—Committee on Municipalities.

H. B. 311. Creates a Civil Defense Agency; authorizes the creation of local organizations for civil defense, etc. March 7—Executive Committee.

Amendment to Professional Engineering Act

House Bill No. 392 has been introduced and on March 21 it was recommended do pass. This is one of a whole series of bills which have been recommended for passage by the Legislative Reference Bureau. The act (if passed) will remove paragraph 1 of section 15 from the act. This is the "Grandfather Clause." It will also repeal the original act which was filed July 24, 1941; this was the act which was found unconstitutional.

Whether H. B. 392 passes or does not pass, it will in no way affect those engineers who now are in possession of valid certificates of registration whether these certificates were obtained by grandfather clause or by written examination. In other words, you need have no worries about this bill.

ROAD SIGNS

The chairman of the Vermont Highway board announced that all privately owned signs will be strictly excluded from the highway right-of-way in the future. The Highway Department plans to make a survey of all privately owned signs now inside the state highway limits. Owners will be given adequate notice to relocate such signs.

"Life will be fine and simple when it's over
And it will all be over when perfection
Of any sort is reached and found sufficing. . . ."

W. J. TURNER: *Miss America*

NEW MEMBERS FOR MARCH, 1951

National

John Gorman Duba, Civil Engineering Dept., Illinois Institute of Technology, Chicago 16, Ill. (Chicago Chapter).

Harold Gordon Mason, 217 Homewood Ave., Libertyville, Ill. (Lake County Chapter).

Frank Vernon Smith, Sargent & Lundy, 140 S. Dearborn St., Chicago 3, Ill. (Chicago Chapter).

Marion Kirk Smith, Box 385, Oblong, Ill. (Ambraw Chapter).

Rollin L. Tippet, 208 S. Jackson St., Waukegan, Ill. (Lake County Chapter).

Benjamin A. Wasil, 3140 S. Michigan Ave., Chicago 16, Ill. (Chicago Chapter).

Lyndon F. Wilson, 122 S. Michigan Ave., Chicago 3, Ill. (Chicago Chapter).

Engineer-in-Training

Carl Albert Wieland, 2654 S. 7th St., Springfield, Ill. (Capital Chapter).

William Arthur Barnes, 227 S. Academy St., Galesburg, Ill. (Kewanee Chapter).

Junior

John Reed Wright, 130 N. Pence, East Alton, Ill. (Madison County Chapter).

COVER PICTURE

Recently Dedicated Milwaukee-Dearborn-Congress Subway, Chicago

The MILWAUKEE-DEARBORN-CONGRESS SUBWAY extends a distance of 3.99 miles from a connection with the Logan Square elevated structure near Damen and Milwaukee Avenues, southeastward under Milwaukee to Lake Street, east under Lake to Dearborn, south to Congress and west under Congress to a downtown terminal at LaSalle Street. A two-trace subway, it is ultimately to emerge in the vicinity of Halsted Street and continue westward to a point near South Lotus Avenue, as an "open cut" rapid transit line in the median strip of the Congress Street superhighway.

The new tube, built at a cost of approximately \$39,600,000, is Route No. 2 of Chicago's Initial System of Subways. This figure represents the total cost of the completed subway, ready for revenue operation. Included are the basic construction of tubes, stations and structures, architectural finish, lighting, acquisition of right-of-way, engineering, as well as such operating equipment as track, signals, power, communication and emergency alarm systems.

Subway passengers will enter and leave the Congress Street terminal through the diamond crossover shown in the cover picture. The crossover is controlled from the interlocking room shown at the end of the station.

V. E. Gunlock, President I. S. P. E., is Commissioner, Department of Subways and Superhighways. George L. DeMent, President, Chicago Chapter of I. S. P. E., is Assistant Chief Engineer. Mr. DeMent made the photograph available.

The Job of Civil Defense

Address by MAJOR LENOX R. LOHR, *Illinois Director of Civil Defense*
66th Annual Banquet, *Illinois Society of Professional Engineers*
Urbana, Illinois, February 2, 1951

Preparing to defend ourselves against a possible all-out enemy attack on our homeland is a new experience for the American people—something we have never before had to visualize. Now we know we must do so.

We know that Russia has atomic bombs and has the means of dropping them on the United States. We must face the possibility that Russia will do it, and also strike at the same time in other ways—by bacterial and radiological warfare, and by attempts at every conceivable form of sabotage. These would be attempts by traitorous elements already within this country to undermine, disrupt, and destroy our industrial production and our morale before an enemy attack, during the attack, and after the attack.

Unfortunately a large segment of the people of Illinois are far from alert to the danger confronting us. Many are completely apathetic. Somehow these people must be made to realize the seriousness of the situation.

Others say, "Why worry? If the atom bomb hits us, we're all through anyway." Yet, if we are prepared we can reduce the loss of life by at least 50 percent.

Many others prefer to rest assured that Russia will never attack us. They point to our greater steel production and other resources, and they remind you that our bombing bases are much closer to Russia than Russia's bases are to us. And they call the role of other reasons.

But all that kind of talk can be answered by comparing our predicament with the little parlor game called Russian Roulette. You empty a revolver and put in one cartridge and spin the cylinder and hold the revolver to your head and fire. There is only one chance in six that you will kill yourself, but as long as there is that possibility not many of us are likely to play the game. That is why we have undertaken a program of civil defense—a program that touches the lives of every man, woman, and child, and a program that must have everybody's help.

Just what is civil defense? We often hear it called "civilian" defense. But there is a nice distinction between "civilian" defense and "civil" defense. Civil defense implies much more than civilian defense. Civilian defense connotes protecting and saving lives of our people; civil defense means doing all that but, in addition, ensuring the continuing operations of our pro-



Major Lenox R. Lohr

ductive capacity and our economy.

An atomic attack, or any other kind or a combination of attacks will not be aimed primarily at killing people in the mass, or destroying buildings at random but at delivering the most telling blow possible against the war-making potential of our nation. Yet, to accomplish that the enemy would obviously include among his targets the large population centers where large-scale industrial production is centered.

Our job in civil defense is to prepare to minimize in every way possible the destruction of both life and property by an enemy attack in any form, and

to preserve our industrial production capacity that equips our armed forces to strike back at the enemy and ultimately defeat him.

You may rightly say that the job of defense should begin with keeping an enemy's bombers from reaching us, and I'm sure you know that the Air Force is doing everything it can toward that end. Our radar screens are being constantly broadened and improved for detecting an enemy approach, and our combat planes and anti-aircraft equipment for use against an attack are being augmented.

As additional protection, we at the State Office of Civil Defense have established close to 200 fully manned aircraft ground observation posts in Northern Illinois each with approximately 25 volunteers to serve at a minute's notice. We are also taking steps to get 15 other observation posts ready for action in the area north of Springfield. Later still another network will be set up for the lower half of Illinois.

The duty of the ground observers will be to detect the approach of enemy planes, some of which will have evaded the radar screen, and report them instantly by special telephone to the Illinois Aircraft Warning Filter Center in Chicago. The filter center in turn will flash the information to air defense commanders who will send up combat planes to intercept the enemy.

Yet it is readily conceded by the Air Force that no defenses can provide complete protection—that many planes in an enemy force would inevitably get through to drop their bombs on their targets with varying degree of accuracy.

You engineers doubtless know that there are three kinds of atomic bursts, the least dangerous of which—at least to us in Illinois—is the water burst. Actually,

fresh water cannot be easily contaminated by the bomb. Salt water can be. Salt water becomes ionized and extremely dangerous. The danger of a tidal wave for Illinois also is virtually non-existent, since Lake Michigan and the Mississippi River are not deep enough to create a tidal wave.

A second type of atomic bomb attack is the low level ground burst. It is not as destructive as the third type—the aerial burst—but it does leave a highly contaminated area which would remain radio-active for many weeks.

It is generally believed that Russia would choose as its objective the widest possible physical destruction by the blast itself and so would use the aerial burst—a bomb exploded about 2,500 feet in the air. In such an attack there are four principal dangers: (1) the bomb blast; (2) fire; (3) sabotage; (4) panic.

Bombs being built today are far more powerful than those dropped on Japan. From the burst of a single bomb of this greater destructive power we could expect a completely devastated area of more than a square mile, an uninhabitable area of 15 square miles, and lesser damage over 75 square miles. In a city such as Chicago we could expect 50,000 to 100,000 deaths, with the injured running into the tens and perhaps hundreds of thousands. Such a bomb if dropped in the center of Georgia, for another example, would virtually wipe out the entire city. There is no use blinking these stark facts.

Immediately following the destruction by the bomb blast would be the damage wrought by fire. In a large city hundreds of flash fires would occur almost instantly and most of these would be beyond control. Our efforts would have to be devoted to preventing their spread—confining them to the smallest possible area.

In the crippling effect on our wartime production capacity, sabotage can do more damage than the atomic bomb. The bomb may knock out three or four percent of our capacity, but sabotage can easily destroy 20 percent or more. No one knows how many saboteurs are in the United States, but it is estimated that there are as many as 5,000 in Illinois. Many of these people, on the surface, are fine, loyal American citizens. Fifteen years ago, perhaps, they were sent to this country ostensibly as good family folk, and these families became "good neighbors," "good citizens," "good church members." Before they left for this country they were told: "Your hour will come and in one hour you will justify 15 years."

A few days ago the Chicago Tribune reported that a former civil defense director of a Chicago suburb had been a communist, but that this was not known until after his death. The man was born in this country, had been a vice president of a corporation, and presumably had been a highly patriotic citizen. Yet a police investigation, following his death, uncovered in his room a picture of Stalin and quantities of communist propaganda. Communism can become a fanatical religion and

saboteurs are not necessarily soap-box rabble rousers, but more often are respected men like Fuchs in England who are never suspected. The damage they can do is tremendous. The havoc caused by saboteurs prior to and during the Japanese raid on Pearl Harbor will be long remembered.

Concurrently with an atomic bomb attack saboteurs may attempt to disrupt communications and transportation, perhaps by dropping a stick of dynamite into a telephone manhole, destroying a radio tower, jamming a switch on a railroad, destroying an insulator on a high-tension line with a high-powered rifle, and/or running a truck across a main highway and setting it on fire.

In the confusion that would reign after an atomic bomb explosion, small groups of armed saboteurs might even overpower guards at manufacturing plants and do extensive damage to machinery. Their movements would be difficult to anticipate and it would be hard to differentiate them from rescue teams until too late. They could jam essential radio transmitters, spread false rumors, and give conflicting instructions to mobile support units.

Many of you are connected with industrial plants. I urge you to take the fullest protective measures against sabotage. We have recently sent to all local civil defense directors an outline for plant protection programs, and we hope there will be no delay in getting these programs under way. Make it your business to see the civil defense director in your community and work with him. Don't depend on the police for this protection. It would be easy for a saboteur to counterfeit badges or whatever is necessary to pass himself off at the entrance to your plant as a protective officer. A few sticks of dynamite in the hands of a pretended "Boy Scout" could put your plant out of production for a long time. There are hundreds of ways for saboteurs to do their work.

Now as to panic. Panic can kill more people than any other single factor in a disaster, and strangely the dire potentialities of panic have not been given the attention they deserve. The natural instinct of self-preservation which we all have, the apprehension for the safety of loved ones, the hysteria and fear of the unknown when some terrible catastrophe grips us, make men do things inconceivable under normal conditions. Trained troops frequently disintegrate under their first baptism of fire, although afterwards they may become hardened soldiers.

We will not have the experience of the British in World War II of being bombed day after day, month after month, year after year, and becoming inured to it. We may expect at the most two or three atomic bomb attacks, so we must be prepared for the first onslaught. If we can inculcate in our people the impulse and the will to do the right things under harrowing circumstances, many of those who otherwise would die can be saved. But if panic grips the rescue squads, if workers and guards leave their appointed tasks, if people go berserk and stampede, chaos will ensue. Police are help-

less against masses of innocent but hysterical citizens. Panic can be quite serious in its effects as the atomic bomb itself, and much study must be given to it to prevent or control it.

The surest means is to so instill in the people, by a program of public education, exactly what to do individually and collectively when an air raid warning is given. I am pleased to say that such a program is getting under way, not as speedily as I would wish, but it is gathering momentum and in the coming months you should be seeing more visible evidence of it.

Obviously, in this connection, the possibilities of evacuating a community's population is to be considered as a part of orderly protective measures—although evacuation is one of the most difficult phases of civil defense to plan with any degree of certainty.

There are a number of types of evacuation. One is the gradual evacuation that has been taking place for a good many years due to changes in our mode of living. I refer to the large number of people who have been moving out of the cities into the suburbs. That, of course, from the standpoint of civil defense is a good thing.

Another type is selective evacuation, which can be used presuming we have a warning of a likely attack a month or even a week in advance. Here, under no condition, would workers be moved, for that would be playing the enemy's game. All he would need do to hold up our production would be to keep us in perpetual fear, whether an attack ever came or not. But we could evacuate women and children and some of the aged.

A third type of evacuation is that of getting people out of a city with only an hour or half-hour warning. Here is a poser which up to now has everybody stumped for a satisfactory solution. In Chicago all you need do is see the 5 o'clock rush for home to get an idea of the problem if the element of fear were added. It might be wiser not to attempt an evacuation from downtown Chicago. In some of our other Illinois cities hurried evacuation would be more likely to accomplish its purpose. Even so, many might be killed in traffic jams—a needless tragedy if the attack on the city failed to materialize.

You probably are thinking, "What about bomb shelters?" Personally, I have little faith in the concept of large-scale communal shelters. Consider again the Chicago downtown district. First you have to put such shelters underground, disrupting all utility lines, and it would take years to build them. Further such shelters might very well prove to be death traps—by fire, flood, or stampede. And if a fire storm were raging above them, there would be no oxygen. Better to use what shelters are now available, such as bank vaults and other basement quarters, and also train the people in other measures they can take for reducing the danger to themselves while remaining in the buildings they occupy.

I do, however, believe that in the homes comparatively safety can be had by a small amount of construction work in basements. Such shelters could not only take care of those living in the buildings, but of others in addition.

A fourth type of evacuation would be necessary after an attack—the evacuation of thousands of injured and homeless. The injured would somehow have to be hospitalized and temporary shelter for others would have to be provided. All that presents a stupendous problem, but we are working on it and have issued evacuation plans to the local civil defense organizations. We expect to follow up with every means at our disposal to see that the plans are put into effect and that the public understands them.

The basic principle in our State-wide planning is that of mutual aid—the assistance our cities and towns can bring to any stricken community. With that in mind we are organizing mutual aid areas around the large cities and industrial centers whereby an entire region, such as the six counties in the Chicago metropolitan area, can act concertedly with its fire departments, police departments, hospitals, doctors and nurses, and auxiliary forces of trained volunteers on a thoroughly planned procedure.

On the broad scale, the State plan envisages a network of roads leading to each of the eight cities in Illinois which have been designated by the National Civil Defense Administration as critical target areas, these roads to be kept open at all cost to expedite the movement of rescue teams and to evacuate the injured and homeless. These main arteries must mesh with the city streets through which traffic is to pass.

Around the periphery of each target area, adjacent to each major highway, there will be collection points for assembling mobile support units. Each collection point will be prepared to receive four types of mobile support units—fire equipment; police and other protective personnel; medical services, including doctors, nurses, and ambulances; and heavy equipment such as bulldozers, power shovels, and trucks to remove the debris. The formation of these units will be the responsibility of the cities in the State having sufficient equipment and supplies to furnish them. The function of the State will be to make sure that they are properly organized and equipped and to bring them as expeditiously as possible by highway, railway, or airway to the collection area of the city struck by a bomb.

When that is done the units will be turned over to the operational jurisdiction of the local city authorities. It is not contemplated that the State, as such, will operate any of these units at the scene of disaster. The doctor with their supporting staffs and supplies will be under the authority of the local director of public health. Fire equipment will be turned over to the local fire marshal or his deputy to be used in such ways as the situation demands.

Each mobile support unit will be entirely self-contained. For instance, heavy equipment, such as bulldozers and shovels, will arrive with competent operators ready at the controls. These units will have gasoline, food, and water to supply their needs for at least the next 24 hours.

A communications network will be established over the State by telephone and radio to direct the movement of personnel, equipment, and evacuees. Here the radio-equipped cars of the State police will constitute an important unit of the system.

While the role of different communities will vary, there must be uniformity in the State plans and some of these plans will have to be extended on an interstate and even national basis. For example, it must be determined when and by what means the various warning signals for an atomic bomb attack are to be made, how broadcasting stations are to be utilized, whether or not there is to be advance mass evacuation, and whether blackouts are necessary. Also there must be uniform color identification of different types of rescue equipment, so that they will be instantly recognized and properly dispatched not only to any part of Illinois but, if needed, into adjacent states.

Communities, large and small, throughout the State will make surveys, inventories, and plans in preparation for receiving, housing, and caring for the injured, the homeless, and the economically displaced until they can be rehabilitated and the able returned to the all-important productive ranks.

For implementing all these plans we are leaning heavily on already organized groups to assist in personnel recruitment and in organizing local civil defense agencies. Among the organizations which will have specific defense responsibilities are the Illinois State Guard, Red Cross, Civil Air Patrol, Boy Scouts and Girl Scouts, veterans' organizations, fraternal organizations, churches and business men's clubs.

All plans have been predicated on the understanding that neither the Federal armed forces nor the Illinois National Guard will be available for civil defense purposes. Such duties as protection of important installations and suppression of sabotage in Illinois outside of private plants will fall to the State Guard which will replace the National Guard when the latter goes into Federal service.

In similar fashion the Civil Air Patrol will be used as a reconnaissance agency, and as a means of transportation and evacuation, traffic control, and communication.

The Red Cross has already offered all possible cooperation. It will take the lead in training civil defense workers and the general public in first aid; in education in home care of the sick and injured; in provision of food, clothing and temporary shelter on a mass basis in periods of emergency, and in establishing blood banks.

Boy Scouts will be used for messenger services, assistance to rescue and ambulance units, aid to the Red Cross in first aid training, and service with the aircraft ob-

server posts. Camps owned by Boy Scouts may be used as evacuation centers.

The plans call for heavy use of the veterans' organization as auxiliary law enforcement officers, firemen, aircraft observers, and block wardens, as well as in their already established national position of cooperation with the Red Cross. Veterans will also assist the State Department of Public Welfare in the care of evacuees and the homeless.

The clergy can exert a powerful influence throughout communities in the dissemination of information tending to lessen the dangers of panic, fear, and hysteria. Church kitchens can be utilized in aiding evacuees and the homeless. Clerical counsel and advice to the confused and sick is of the utmost importance.

As I said at the beginning, the job of Civil Defense on a scale such as has been undertaken is new to us all, and it is a responsibility of all citizens, without exception. How well we perform the task depends on how zealously everybody pitches into it.

An enthusiastic response of the people to this "call to arms" can mean tens of thousands of lives saved, and the ability to sustain the industrial contribution of the State of Illinois to the nation's fighting power and to our preservation as a free people.

Major Lenox R. Lohr

SECURITY OR LIBERTY?

Two words. One is strange and unlike America. That word is Security. The other word is America itself. That word is Liberty.

Security as it is used today is an illusion which leads to enslavement. Liberty exalts mankind.

Security is a dead-end street. Liberty is the path of wonderful adventure.

Security is decay. Liberty is growth.

Security is the death of effort. Liberty is the life of endeavor.

Security is the man of 40 who is 65. Liberty is the man of 65 who is 40.

Security is of little faith. Liberty is the immortality of earth and heaven.

Security is the frown of bookkeeping. Liberty is the smile of confidence.

Security promises much and delivers a pittance. Liberty promises nothing and yields a harvest of plenty.

Security is the mirage of minds that settle for guardianship. Liberty is the mind that lives above the crowd.

Security is the object that holds our attention while Liberty slips from our grasp.

Georgia Professional Engineer.

Highway transportation industries employ over 9,000,000 persons—equivalent to the entire adult population of the New England states plus Arizona, Colorado, Montana, New Mexico, and Wyoming.

Illinois Society of Professional Engineers

Affiliated with the National Society of Professional Engineers

Monthly Meeting—March 5, 1951

President George L. DeMent announced the appointments of chairmen to the various committees as follows:

Advertising—Duncan Campbell, Chief Engineer, Cook County Highway Department.

Budget—Frank W. Edwards, Director, Illinois Institute of Technology.

Ethics and Practice—Harold V. Hawkins, Illinois Institute of Technology.

Legislative Analyzing—K. C. Hoeglund, Engineer, Bauer & Black, Division of Kendall Company.

Legislative Action—Robert W. Wallace, Chicago Department of Subways and Superhighways.

Membership—Harold F. Sommerschild, Portland Cement Association.

Civil Defense—J. J. Kearney, Arcole Midwest Corporation.

Program—William O. Swinyard, Chief Engineer, Hazeltine Research, Inc.

Public Interest—L. M. Keoughan, Sanitary District of Chicago.

Publicity—Theodore Olson, State of Illinois, Division of Highways.

Registration and Laws—A. P. Graf, Patent Attorney, 135 S. LaSalle Street.

Building Code—Arthur Bladen, Engineer, 431 S. Dearborn Street.

V. E. Gunlock, President of the Illinois Society of Professional Engineers, made a report of his experiences while attending the State Presidents Convention of the N. S. P. E. at Washington on the previous Friday and Saturday.

The audience given the State Presidents by the various representatives of the Government having to do with the mobilization program was of importance to the engineering profession.

Some of the top men in the various agencies spoke to the Presidents of the N. S. P. E., which indicates that N. S. P. E. is being recognized in Washington.

During these talks the seriousness of the Engineer-Power problem was discussed by the Government representatives.

A. W. Graf introduced the speaker of the evening, Wayland B. Cedarquist, who spoke on the subject, "Bringing the Illinois Constitution Up to Date." Mr. Cedarquist gave an interesting and educational talk full of timely information on reapportioning, judiciary, revision of the revenue article, public housing and taxes.

Meeting Notice—May 1, 1951

W. O. Swinyard, Chief Engineer, Hazeltine Research, Incorporated, will give a talk on color television at our May 1st meeting. This talk will be informative and educational and will be principally to those engineers not in the television field.

W. O. Swinyard has been very active in the electronic and radio field and recently attended the Hazeltine Research Corporation color television school in New York and I urge you all to make plans now to attend this meeting and bring your guest.

Meeting Notice—June 5, 1951

W. L. Everitt, Dean of the College of Engineering, University of Illinois. "Responsibilities of the Professional Society in the Education of an Engineer" will be the subject. All members are fully aware of Dean Everitt's comprehension on matters of this kind. I heartily recommend you to be on hand for this meeting.

Civil Defense

Kenneth A. Johnsen, Supervisor of Construction, State of Illinois, Division of Highways, has returned to his duties in the Highway Department after a three-month assignment on Major Lenox Lohr's staff in the State Office of Civil Defense located in the Museum of Science and Industry in Chicago. He will be replaced on the staff by another engineer from the Chicago office of the Highway Department, Herman G. Heshin.

Public Interest

L. M. Keoughan, chairman of the Public Interest Committee states that there are twenty engineers attending a refresher course for a professional engineers examination at the Riverside Central School. The course is being conducted by the Extension Division of the University of Illinois. Sessions are from 7:00 to 9:00 on Tuesday evenings.

F. W. Edwards, Vice-President of the Chicago Chapter, had an interesting article published in the American Engineer for March. It is recommended for your study.

Membership

Harold F. Sommerschild, chairman of the Membership Committee, has selected the following to act as team captains in the forthcoming membership drive:

Linus H. Brown
Leo M. DeSautels
John A. Fensterle
K. A. Johnsen
F. Kirchner
Miles Lamb
Samuel R. Lewis
Ernest W. Nordquist
Edward L. Reiter
C. A. Walls

The Membership Committee reports the beginning of a campaign to enlist members in the Chicago Chapter I. S. P. E.

They are anxious to extend the influence of I. S. P. E. N. S. P. E. in the Chicago area. To do so is not a one man's job, so they are going to request that every member obtain at least one member during the year. You will hear from this committee shortly and we trust that you will cooperate in this effort to make this chapter a vital organization.

Resume of Business Transacted at 66th Annual Meeting

Illinois Society of Professional Engineers Urbana, February 1-3, 1951

(Prepared by G. E. EKBLAW, *Past President, I.S.P.E.*)

Most of the business at the annual meeting related to matters covered by committee and officers' reports. Although the meeting and official transaction of business did not start actually until Friday morning, much was accomplished at the Board of Direction meeting the preceding day, when these reports were reviewed. In accordance with recent practice, members of the Society were welcome to attend this Board meeting when these reports were reviewed and to participate in the discussion of them. Consequently this account covers actions taken both at this Board meeting and at the annual meeting of the Society, as well as any relevant actions taken by the 67th Board of Direction at its first meeting on Saturday afternoon following.

I. The president's report and an abstract of the secretary's report have already been published in the *Illinois Engineer*. The treasurer's, comptroller's, and auditor's reports may be summarized as follows:

Current Account

Cash in bank on hand Jan. 1, 1950.....	\$ 8,617.92	
Less Liabilities:		
N. S. P. E. dues	\$ 2,185.50	
1950 dues	5,403.00	
Accrued taxes	99.32	8,017.23
Net (actually encumbered for unpaid Chapter refunds and accounts payable)		600.69
Income		
Dues.....	\$14,377.00	
Applications.....	1,198.60	
Advertising.....	1,543.58	
Interest.....	37.50	
65th Annual Meeting.....	350.00	
Pins.....	5.00	
Reprints.....	488.34	18,000.03
Total Available		\$18,600.72

Expenditures

Salaries—Office personnel	\$ 7,508.66
Secretary's honorarium	600.00
Editor's honorarium	500.00
Social Security tax.....	115.57
Auditor's fee	60.00
Rent and moving.....	566.02
Furniture	930.90
Office supplies	214.38
Miscellaneous printing	227.02
Postage	
(Not including <i>Illinois Engineer</i>)....	547.71
Telephone and telegraph.....	106.80
Assistant Secretary's travel.....	164.37
Officers' travel	17.46
Board meetings	218.28
<i>Illinois Engineer</i>	3,169.30
Chapter refunds	1,753.70 ^a
Advertising commissions	56.49

Illinois Engineering Council.....	50.00	
Illinois Award	25.05	
Bank charges	18.67	
Contingent	463.35 ^b	17,318.73

Balance (no outstanding accounts reported)	\$ 1,281.99
---	-------------

Assets

Cash in bank and on hand.....	\$ 9,742.27	
Less liabilities:		
U. S. P. E. dues	\$2,221.50	
1951 dues	5,403.00	
Legislative analyst fund..	757.00	
Accrued taxes	78.78	8,460.28
Net cash reserve.....		\$ 1,281.99
U. S. Government bonds.....		1,500.00
Furniture (cost less depreciation).....		885.48
Total net worth.....		\$ 3,667.47

This summary shows that during 1950 the financial condition of the Society was improved even more than had been previously realized. It may be noted that the net bank balance at the beginning of the year was not quite sufficient to cover all accounts payable. Consequently the net cash balance at the end of the year was achieved actually during the year. In addition the furniture needed to furnish the new headquarters of the Society was purchased. Thus the savings and investments accomplished during the year total more than \$2,200. The favorable factors that made most of this possible have been previously reviewed, but a substantial part of it results from reduced expenditures for the *Illinois Engineer*.

The budget for 1951 as recommended by the Budget Committee and adopted by the 67th Board of Direction totals \$18,000, with the respective items of income and expenditure closely comparable to those realized in 1950.

II. Last May the Champaign County Chapter by resolution petitioned the Board of Direction "to determine what is the proper amount of dues that should be required with the present membership to cover annual operating expenditures and minor contingencies and to build a reserve for major contingencies at the rate of at least one dollar per year per corporate member" and "that the above estimate be sent to all corporate members of the Society with a letter ballot on raising the dues to an adequate amount." The resolution was referred to the Budget Committee for study and report. As a result of their study the Budget Committee submitted at the Annual Meeting what they called a "desirable" budget, which included not only the reserve called for in the resolution but also minimum amounts for a desirable expanded program of activities for the Society. This "desirable" budget totalled \$24,800, and

^a Includes \$395 for previous year.

^b Includes \$210 + for 1949 accounts payable.

in order to attain it with present membership it would be necessary to raise dues of National and State members and affiliates \$4.00 per year, of Engineers-in-Training and Juniors \$2.00 per year, and of Students \$1.80 per year.

After considerable discussion, a motion neither to increase the dues nor to poll the membership by letter-ballot about it in 1951 was passed by a large majority.

III. Also after considerable discussion, a motion that the Society constitution be amended to eliminate chapter refunds, whereby the Society funds would be accordingly increased, was defeated by a substantial majority.

IV. Recommendations by the Ethics and Practice Committee (1) that the committee be expanded to include the chairmen of the Chapter committees of Ethics and Practice, (2) that the committee be authorized to render opinions as to whether or not certain situations are ethical or proper without any action by the Board of Direction, that such opinions should be made a matter of record available to any corporate member of the Society and may be published in the *Illinois Engineer* without indicating any actual individuals or localities, and that this does not apply to opinions on past actions by others, and (3) that the State Society adopt the National Society's Code of Ethics were approved.

V. Recommendations by the Committee on Fees and Salaries (1) that the I. S. P. E. Recommended Schedule of Fees and Salaries be published with a Code of Ethics corresponding to the N. S. P. E. code, publication to be delayed until committee can make a thorough study of the full report of the U. S. P. E. on fees and salaries, (2) that the present "cost plus 100%" basis for resident supervision and inspection fees be continued until sufficient factual data as to prevailing practice can be obtained, and (3) that the method of handling overtime pay as set forth in the 1948 report of the Employment Condition Committee be approved and incorporated, if practicable, if the recommended schedule were approved.

VI. Recommendations by the Public Interests Committee (1) that a committee be appointed to meet with the new Chief Highway Engineer of the State and acquaint him with I. S. P. E., (2) that at a national level, through N. S. P. E., the highway system of the country be designated by ratings similar to those used for airports, and (3) that the "Water Resources Legislation" as prepared by the Peoria Association of Commerce be submitted to the Legislative Analyzing Committee for study and report to the Board of Direction as to approval or disapproval were approved.

VII. Resolutions of (1) thanks to the Champaign County Chapter and its Convention committees, (2) thanks to the management and staff of the University of Illinois Union, and (3) sympathy to the families of members who died during 1950—O. K. Berryman, Springfield; H. L. Caldwell, Jacksonville; George Corwine, Ottawa; Roy S. Huffman, Murphysboro; Harry G. Johnson, Chicago; Leonard J. Laz, Waukegan; James M. Martin, Dixon; Charles J. Nannings, Chicago; Stewart Orgain, Charlotte, N. C.; W. S. Ruggles, Fort

Worth, Texas, formerly of Springfield; Harry C. Sampson, Joliet; R. L. Schoenberger, Princeton; P. S. Shepard, East St. Louis—were adopted.

VIII. The Registration Laws Committee was instructed (1) to attempt to have professional engineers so listed in telephone directories and (2) to cooperate with the U. S. P. E. committee whose duties include the same objective.

A resolution that the Professional Engineers Registration Law be amended to recognize partnerships of professional engineers among themselves or with architects or structural engineers was referred to the Legislative Analyzing Committee.

IX. The report of the State Engineering Employees Committee was referred to the Legislative Analyzing Committee for study and report to the Board of Direction, and the Board was requested to take action appropriate towards carrying out the five recommendations in the report.

X. The recommendation by the U. S. G. S. Mapping Committee that it be expanded to include at least one member from each chapter and that this expanded committee should then (1) canvass engineers by questionnaire to ascertain whether or not they considered the present and contemplated program based on current appropriations adequate and (2) formulate such remedial measures as may be found desirable was approved.

XI. As a result of the panel discussion on building codes, a motion that the Society establish a State Building Code Committee was approved.

XII. A motion that the Secretary be instructed to notify the Governor and members of the General Assembly that the Society favors the adoption of a program of increased revenue for highway construction and maintenance was approved.

XIII. The Board of Direction referred to the Legislative Analyzing Committee (1) a resolution from the Peoriarea Chapter requesting consideration of legislation (a) permitting counties to construct road and street improvements under the local improvement law, (b) regarding present method of annexation of subdivisions to cities, (c) giving cities and villages additional bonding power, (d) simplifying publications required of small municipalities, (e) providing to State Water Survey Division funds for assisting small municipalities to obtain water supplies, and (f) regarding Water Conservation, as prepared by the Peoria Association of Commerce, (2) a communication concerning the State Lien law, and (3) a communication and attached draft of a proposed bill to establish a Uniform Boiler Inspection Board.

XIV. The invitation from the Peoriarea Chapter to hold the 67th Annual Meeting in Peoria was enthusiastically accepted.

XV. A proposal that the chapters be requested to consider having the Annual Meeting of the Society at a different season of the year and that they be canvassed to determine the sentiment regarding such a change was approved.

News From Chapters

Lake County Chapter

The Lake County Chapter of the Illinois Society of Professional Engineers held its monthly meeting Wednesday evening, February 21, 1951 at the Swedish Glee Club in Waukegan with 45 members and guests present for dinner.

President Calkins called the meeting to order at 8:00 p. m. Minutes of the December 20, 1950 meeting were read and approved. No treasurer's report was made. Committee reports on membership by Mr. Anderson, publicity by Mr. Hooper, State Convention by Mr. Calkins and building code by Mr. Hooper were made. The Chapter Representative, Mr. Simonson, reported among other things that Lake County had been honored at the Annual Meeting by the appointment of Mr. Amstutz to the State Advertising Committee and Mr. Hooper to the committee to study building code standardization.

The question of expenses for authorized representatives attending the Annual Meeting was discussed and a committee, consisting of Mr. Needham, chairman, and Mr. Danoff and Mr. Weber, was appointed to look into the matter.

President Calkins turned the meeting over to Mr. Lietzke who introduced the speaker of the evening: Mr. Paul N. Newhouse.

The speaker outlined the economics of the various applications of radio frequency heating and the method of designing and adapting this new tool for handling many industrial problems in such a manner as to simplify and speed up processes and cut costs. A color film was then shown demonstrating a variety of applications presently in use in certain industries.

The meeting was adjourned at 9:41 p. m.

R. G. KRAMER, *Secretary-Treasurer*.

Madison County Chapter

Our Annual Meeting was held December 12, 1950 in the "Annex" of the Episcopal Church in Alton. A complete turkey dinner was served to twenty members and sixteen guests, including wives.

After introduction of guests, President Flagg reviewed some of our achievements of the past year. He also pointed out some remaining objectives for the year to come, and urged the members to take more time for activities, such as Public Relations, Civil Defense, and expanding our membership.

The new officers responded to introduction with appropriate remarks, and the meeting was turned over to Program Chairman Graham. A group from Alton Little Theater presented "An Evening of T-V," consisting of magician, musical and other numbers, a quiz program with prizes, and square-dancing in which all were invited to take part.

January 9, 1951. Meeting was called to order by President Shanahan at the Edwardsville Gun Club, with

seventeen members and four guests present. Minutes of the November meeting were approved as read.

President Shanahan named a list of Chairmen of the Chapter Committees. Mr. Corlew reported for the Civil Defense Committee, and Mr. Flagg read a proposed questionnaire for member information, to be used in co-operation with other Civil Defense groups. Mr. Visser suggested other items, of professional interest to our own members, which might be included in a questionnaire.

Mr. Willis reported contribution of \$135 to the Legislative Analyst Fund to date. He also pointed out that some Chapters voted against this idea. Mr. Voorhees spoke of the Illinois Engineers' Council as an organization of 3000 to 4000 members, interested in an Analyst program for legislation affecting engineers. Mr. Shanahan spoke of the Highway Engineers' fund built up over a period of two years, with which other groups' funds might be combined for support of a Legislative Analyst.

Program Chairman Graham then introduced Mr. Herb McCoy of Collinsville who spoke on "Civil Defense." Mr. McCoy stated that the Atomic Bomb has brought a new era in warfare, with every part of the world vulnerable to delivery by plane or submarine. He gave estimated casualty statistics, and described the set-up of the Collinsville organization, and some of their experiences, following the Greenville tornado.

After a period of questions and discussion, the meeting adjourned on motion of Mr. Corlew.

Madison County Chapter held a meeting at the Quonset Building, Shell Oil Co., Roxana, on February 13, 1951. Due to lack of a quorum, no formal business meeting was held. Those present, however, stayed to observe the program provided, consisting of two reels of sound film from the Navy Library.

Meeting adjourned about 10 p. m.

L. K. MEYER, *Secretary*.

Capital Chapter

The Capital Chapter held a meeting on February 27, 1951. After enjoying a steak dinner at the Mill, President L. D. Hudson called the twenty-six members present to order for the regular business meeting. A letter from one of the Chapters most active younger members, Lee E. Stickler, was read by the Secretary, in which Lee informed the Chapter that he was returning to active duty with the Navy on 6th March and requested military leave for the period of his absence and gave a complete report on the status of the two committees of which he was chairman. The second paragraph of Mr. Stickler's letter is quoted herewith:

"I can truthfully say National Society of Professional Engineers and Illinois Society of Professional Engineers, Capital Chapter in particular, have been a great inspiration to me to advance professionally. Getting my Pro-

Professional Engineers license was as great a thrill to me as graduating from college. Our monthly meetings afford a medium of fellowship where we young engineers can mingle with and know Professional Engineers who have favorable influence upon us. We also meet a cross section of the engineering profession unequalled by any other engineering organization. These are but a few of the many things for which I am grateful to NSPE, ISPE, and Capital Chapter."

Chapter Representative, L. K. Crawford, gave a brief report on the State Convention and the Board of Directors meeting. Fourteen members of Capital Chapter were present at the convention. One of the highlights of the convention was NSPE President S. L. Stolte's address stating the aims and progress being made by the organization and stressing the importance of membership activity. Committee reports and other recommendations by Capital Chapter members were referred to committees for further study. Next years convention will be at Peoria, Illinois and the Chapter has been asked to carefully consider the convention date.

President Hudson reported for the Executive Committee that the Legislative Analyst Fund contributions that had not left the Chapter were being returned to the donors and that several had voluntarily returned them to the Chapter for use as a Chapter Legislative Fund.

Harry Cordes, Chairman of the Membership Committee, made a plea for a membership drive by each member of the Chapter and a list of prospects is available. Each member is requested to write Harry and obtain two or more prospects to contact.

Cecil Chenoweth's program committee has the theme of increased attendance at meetings as their goal for the year and have several interesting meetings and ideas in mind to accomplish this purpose.

Public Relations will again be headed by Al Frost and a plan of programs toward this end is under way. A refresher course for the Professional Engineers Examination was started on February 26th with twenty-two present.

In order to give E.I.T.'s more voice in Chapter Activities, President Hudson requested Charles Vusich to canvass their members and select one to act as their representative on the Chapter Executive Committee.

Mr. Morrisett discussed the project of the National Committee on Unity and the importance to the Society of this work.

A motion was presented by Dave Abbott and seconded by J. P. Murphy relative to Capital Chapter spearheading the establishing of a policy for a long range community plan for Springfield and vicinity. After much discussion, a revised motion was carried authorizing the Executive Committee to reword the motion along the ideas presented in the discussion and present it to civic leaders in the community.

At the conclusion of the business meeting, the program was turned over to a discussion of Capital Chapter's part in Springfield's Civil Defense. H. A. Spafford intro-

duced the subject by a talk on what we may expect in the event of an "A" Bomb attack, what the effects might be, the intensity of them, and the best procedure for the individual to follow in case of an attack.

J. P. Murphy, chairman of the Chapter Civil Defense Committee then explained our function as a part of the defense plan. The Chapter has been assigned the Public Works Branch for our vicinity. This is divided into four parts, which will be headed by Chapter members, three having already accepted and one to be appointed. It was emphasized that this is not being organized as a temporary measure but may develop into a more permanent one. The organization of each group will be left entirely to the members with no help from outside directives. An appeal to all members was made to pitch in and help on this important project. Meeting was adjourned at 10:00 p. m.

L. F. RYBURN, *Secretary*.

Egyptian Chapter

The Egyptian Chapter of the Illinois Society of Professional Engineers met February 27, 1951, at 6:30 p. m., at Jackson Country Club near Murphysboro.

Chapter President Fred H. Persson presided at the meeting, following dinner. Members present were Owen, Keen, Blankinship, Cromeenes, Sherertz, Brock, Simmonds, Ritchie, Harris, Gates, Riseling, Kerwath, Burnett, Haroldson, Persson, Viterisi, Hindman, Setzekorn, and Lee. Present as visitors were Charles Owen, Jr., Frank Owen, Geo. W. Chenoweth, Fred Madorin, Miles Miller, Buddy T. Powers, John F. Meacham, Samuel E. Carrothers, Harold J. Blank, Frederick W. Stanton, J. Bione, Harold E. Efner, Walter S. Skeels, Geo. R. Carter, George Scherrer, Budd Nix; and the guests presenting the program, who were President Delyte W. Morris of Southern Illinois University and Wayne Mann, Director of Alumni Services at SIU.

Mr. Persson spoke briefly on Society and Chapter aims. The minutes of the preceding meeting were read and approved. The Treasurer reported practically no balance.

Mr. George R. Carter told us about the two refresher courses which had started the night before at SIU under our sponsorship, with 40 men in the two courses. He invited anyone else caring to attend to appear at the next meeting.

Our new membership chairman, Mr. John T. Blankinship of Murphysboro, was introduced. He promised to work at it.

There was no report on the State convention. Bad weather prevented attendance from this Chapter.

After discussion, it was decided to continue meeting at the Jackson Country Club, and to continue meeting on Tuesday nights.

Because of the condition of the Treasury, it was moved by Setzekorn and seconded by Blankinship that the chapter assess 50 cents per member yearly dues, effective immediately. This motion passed unanimously.

Program Chairman Kerwath then introduced President Morris of SIU, and Mr. Wayne Mann. Mr. Morris presented a most effective program on the future of SIU, followed by general discussion. The facts and figures given by Dr. Morris showed great need and desire for higher education in the south 31 counties of the State, which are not being met. He showed that SIU has about one-half its present potential enrollment, that Southern Illinois is too far below the average educational level, and that SIU has only from one-fifth to one-half of the various facilities and physical plant that it should have to meet the need, in comparison with other areas of the State, and in comparison with similar institutions in this and other States.

Dr. Morris brought out forcefully the desire and efforts of SIU to meet the particular needs of Southern Illinois, and to avoid wasteful, or inefficient duplication of existing facilities at other institutions.

Dr. Morris requested cooperation and assistance in securing appropriations and laws necessary for SIU.

J. L. BURNETT, *Secretary*.

Central Illinois Chapter

The Central Illinois Chapter of the Illinois Society of Professional Engineers held their regular monthly meeting on Thursday evening, February 22nd, at the Staley Club House. There were 30 members and guests present.

After the dinner, the business meeting was called to order by President Herman Dorn. Mr. J. A. Askren was called upon to give a brief report of a broadcast in which he took part on Saturday, February 17, over station WDZ. The purpose of the broadcast was to interest men in taking part in the Civil Defense Program.

Motion was made by Mr. J. R. Gardner that a resolution be drawn up for M. J. J. Woltmann, who was made an Honorary Member at the last State Convention, and that he should also be recognized as an Honorary Member of the local Chapter as well. Motion was seconded and carried.

In recognition of Engineer's Week, three Engineering Hand Books were secured from the Doubleday Book Shop in St. Louis, and these were presented to the Decatur Public Library by President Herman Dorn and Vice President Barclay F. Behrendt. The books were; "General Engineering Hand Book," "Hand Book of Engineering Fundamentals," and "Civil Engineering Hand Book."

It was suggested by Mr. Behrendt that our members look over their text books at home with the idea of giving some of them to the Library. John L. Howie made a motion that the President appoint a committee to handle a book project for the Library. Motion was seconded and carried. Mr. Rechsteiner of the Link Belt Co. stated that his Company would be glad to present a copy of their Hand Book.

Our speaker of the evening was Mr. D. E. Radcliffe, of A. C. Allyn & Co., who gave us a similar discussion

about a year ago on "Investment Securities." The discussion period which followed at considerable length, proved that the subject was of much interest to all those present.

FLOYD E. TROXEL, *Secretary*.

Illinois Valley Chapter

A business meeting held March 27, 1951, was called after a Turkey dinner was served at the Riverside Inn.

Mr. J. B. Moran, President, called the meeting to order at 8:10 p.m., and introduced the guests. Thirty members and five guests were present. The minutes of the previous meeting of January 25, 1951 were read and approved.

Mr. Dunavan gave some of the highlights of the State Meeting which were interesting and brought forth some questions.

Mr. Staats, Chairman of the Membership Committee, gave his report.

The Federal Bureau of Investigation's Special Agent, William H. Gray, outlined the duties of the F. B. I. and gave a very informative and interesting talk, and answered questions for approximately an hour.

Mr. Moran called for the adjournment of the business meeting at 10:00 p. m.

E. D. ANTROBUS, *Secretary-Treasurer*.

Joliet Chapter

Minutes for regular meeting—Tuesday March 20, 1951.

The regular meeting of the Joliet Engineers' Club was held at Little Jack's Restaurant on March 20, 1951, at 6:30 p. m. The business meeting was called to order by President William S. Gray at 7:55 p. m.

The Secreary read the minutes for the February meeting which were accepted into the record as presented.

The Treasurer, W. K. Waltz, gave a brief report as to the financial status of the club. Mr. Gray mentioned the fact of distributing the booklets supplied by the Society on "Engineering as a Profession" and urged all members to try and interest young men in engineering as a profession.

The program was presented through the courtesy of the Globe Refining Company of Lockport, Illinois, and there was a 16 mm. film shown entitled "Pattern for Survival." Previewing the film, Mr. Robert L. Price, head of the Physics Department of the Joliet Junior College and High School, gave a very interesting talk on atomic bombs and the results to be expected if one were dropped. The film then graphically described different ways and methods by which civilian population must protect themselves.

The meeting was attended by 26 members and 3 guests.

President William S. Gray adjourned the meeting at 9:30 p. m.

W. S. CHANEY, *Secretary*.

PROFESSIONAL DIRECTORY

DE LEUW, CATHER & COMPANY

CONSULTING ENGINEERS

Transportation, Public Transit and Traffic Problems

Industrial Plants

Railroads

Subways

Power Plants

150 North Wacker Drive
Chicago 6, Illinois

Grade Separations

Expressways

Tunnels

Municipal Works

79 McAllister Street
San Francisco 2, Calif.

GREELEY AND HANSEN

ENGINEERS

Water Supply, Water Purification, Sewerage, Sewage
Treatment, Flood Control, Drainage, Refuse Disposal

220 SOUTH STATE STREET
CHICAGO 4, ILL.

ALVORD, BURDICK & HOWSON

CHAS. B. BURDICK

LOUIS R. HOWSON

DONALD H. MAXWELL

Water Works

Water Purification

Flood Relief

Sewerage

Sewage Disposal

Drainage

Appraisals

Power Generation

CIVIC OPERA BLDG.

CHICAGO 6, ILL.

JOHN DOLIO

CONSULTING ENGINEERS

Industrial Plants and Piping

Street Lighting—Electrical Surveys

Air Conditioning—Ventilation

Sewerage—Water Works—Power Plants

208 S. LaSalle Street
Chicago, Illinois

JENKINS, MERCHANT & NANKIVIL

Consulting Engineers

Municipal Improvements

Power Development

Traffic Surveys

Flood Control

Air Ports

805 East Miller Street

Sewerage

Water Systems

Industrial Plants

Recreational Facilities

Investigations and Reports

Springfield, Illinois

CRAWFORD, MURPHY & TILLY

CONSULTING ENGINEERS

Water Works, Sewerage, Airports, Street
Improvements, Traffic Surveys

PHONE: 2-7500

400½ E. ADAMS STREET SPRINGFIELD, ILL.

Second
Edition

3 Examinations
In One Book

NOVEMBER 1948

MAY 1949

DECEMBER 1949

PROFESSIONAL ENGINEERING EXAMINATION REPRINTS

Postpaid \$1.00

USE COUPON

To the ILLINOIS SOCIETY OF PROFESSIONAL ENGINEERS

631 East Green Street, Champaign, Illinois

Enclosed is \$....., please send copies of the Second Edition Professional
Engineering Examinations.

NAME.....

ADDRESS.....